THE EMBODIMENTS OF THE INVENTION IN WHICH AN EXCLUSIVE PROPERTY OR PRIVILEGE IS CLAIMED ARE DEFINED AS FOLLOWS:

1 A vial comprising an outer wall, said outer wall being straight and cylindrical, an inner cavity, said inner cavity being curved.

2 A vial as set forth in Claim 1, wherein the inner cavity is curved in a substantially uniform arc having an apex, opposed ends spaced from the apex and opposed spaced sides at an angle of 90 degrees from the apex.

3 A vial as set forth in Claim 2, wherein the apex of the curved inner cavity is closer to the cylindrical outer wall of the vial than the ends of the inner cavity.

4 A vial as set forth in Claim 3, wherein the said cavity is substantially uniform in cross section throughout its length.

5 A vial as set forth in Claim 4, wherein planes tangent to the sides of the cavity are parallel to each other and at right angles to a plane tangent to said apex.

6 A vial as set forth in Claim 5, wherein one end of said cavity terminates in an end wall.

7 A vial as set forth in Claim 6, wherein the other end of said cavity is open and wherein a cap is adapted to close the said open end.

8 A vial as set forth in Claim 6, wherein the other end of said cavity is open and a pair of keys extend from the outer wall of said vial adjacent said open end, said keys extending in opposite directions from each other.

9 A vial as set forth in Claim 8, wherein each of said keys have edge and side walls at right angles to each other, said walls being tangent to the outer wall of the vial with one of said walls being parallel to the plane tangent to the apex of the cavity.

10 A vial as set forth in Claim 9, wherein a pair of flanges extend from said vial adjacent said open end in directions opposite from each other and opposite to the directions of the keys.

11 A vial as set forth in Claim 10, wherein each of said flanges has a straight wall tangent to the outer wall of the vial and on the same plane as the plane of a side wall of the keys and a curved surface extending from the end the straight wall to the outer wall of the vial, said curved surface conforming to the curvature of the outer wall of the vial.

12 A vial as set forth in Claim 11, wherein a cap is mounted in said open end.

13 A level having a pair of opposed parallel rails, a web perpendicular to said rails and connecting the rails together, a vial-receiving opening in said web, said vial-receiving opening having opposed notches therein, said opposed notches having an end wall and spaced side walls at right angles to said end wall, a vial mounted in said vial-receiving opening, the opposed ends of the vial being mounted in the opposed notches, said vial comprising an outer wall, said outer wall being straight and cylindrical, an inner cavity within said vial, said inner cavity being curved.

14 A level as set forth in Claim 13, wherein the inner cavity is curved in a substantially uniform arc having an apex, opposed ends spaced from the apex and opposed spaced sides at an angle of 90 degrees form the apex.

15 A level as set forth in Claim 14, wherein the apex of the curved inner cavity is closer to the cylindrical outer wall of the vial than the ends of the inner cavity and wherein a plane tangent to said apex is parallel to said rails.

16 A level as set forth in Claim 15, wherein the said cavity is substantially uniform in cross section throughout its length.

17 A level as set forth in Claim 16, wherein planes tangent to the sides of the cavity are parallel to each other and at right angles to a plane tangent to said apex.

18 A level as set forth in Claim 17, wherein one end of said cavity terminates in an end wall.

19 A level as set forth in Claim 18, wherein the other end of said cavity is open and wherein a cap is adapted to close the said open end.

20 A level as set forth in Claim 19, wherein a pair of keys extend from the outer wall of said level adjacent said open end, said keys extending in opposite directions from each other, said keys adapted to be received in the opposed notches.

21 A level as set forth in Claim 20, wherein each of said keys have edge and side walls at right angles to each other, said walls being tangent to the outer wall of the vial with one of said walls being parallel to the plane tangent to the apex of the cavity, said edge and side walls adapted to abut the end and side walls of the notches.

22 A level as set forth in Claim 21, wherein a pair of flanges extend from said vial adjacent said open end in directions opposite from each other and opposite to the directions of the keys.

23 A level as set forth in Claim 22, wherein each of said flanges has a straight wall tangent to the outer wall of the vial and on the same plane as the plane of a side wall of the keys, a curved surface extending from the end the straight wall to the outer wall of the vial, said curved surface conforming to the curvature of the outer wall of the vial.

24 A level as set forth in Claim 23, wherein a pair of vials are mounted side-by-side in said vial-receiving opening with the ends of vials mounted in said notches.

25 A level as set forth in Claim 24, wherein the keys and flanges at the end of one vial are mounted in one notch and the keys and flanges at the end of the other vial are mounted in the other notch.

26 A mold for making a vial comprising a pin assembly having a base and a core pin extending therefrom, a stripper insert removably mounted on said base, a cavity block overlying and removably mounted on the stripper insert, said core pin having a curved portion, said cavity block having an opening, said curved core pin portion extending into the cavity block opening, the walls of the cavity block opening being spaced from the curved portion of the core pin.

27 A mold as set forth in Claim 26, wherein the core pin has an upper portion and a lower portion, the upper portion of the core pin being curved.

28 A mold as set forth in Claim 27, wherein said stripper block has an opening surrounding the lower part of said core pin.

29 A mold as set forth in Claim 28, wherein the opening in the cavity block has a straight cylindrical wall wider than the thickness of the curved core pin portion in order to leave a space between the curved core pin portion and the said wall.

30 A mold as set forth in Claim 29, wherein the lower portion of the core pin is tapered and adjacent to the base and wherein the opening in the stripper insert is correspondingly tapered.

31 A mold as set forth in Claim 30, wherein means are provided to insert a plastic material in the space between the curved core pin and the cavity block in order to form a vial, the lower end of which rests on the stripper insert.

32 A mold as set forth in Claim 31, in which means are provided to remove the cavity block

33 A mold as set forth in Claim 32, in which means are provided to move the stripper insert off the base to push the formed vial off the curved core pin portion, said moving means adapted to move the stripper insert in a straight path over the curved core pin portion.

34 A mold as set forth in Claim 33 wherein the tapered opening in the stripper insert is wide enough to be spaced from the curved core pin portion when it is moved thereover.

35 A method of making a vial having an outer wall and an inner cavity comprising the steps of forming the outer wall in a straight cylindrical configuration, forming the inner cavity of the vial in a curve, said inner cavity and the outer straight cylindrical wall being formed simultaneously.

36 A method as set forth in Claim 35, wherein the inner cavity is formed curved in a substantially uniform arc having an apex with opposed ends spaced from the apex and with opposed spaced sides at an angle of 90 degrees from the apex.

37 A method as set forth in Claim 36, wherein the apex of the curved inner cavity is formed closer to the cylindrical outer wall of the vial than the ends of the inner cavity.

38 A method as set forth in Claim 37, wherein the said cavity is formed substantially uniform in cross section throughout its length.

39 A method as set forth in Claim 38, wherein planes tangent to the sides of the cavity are formed parallel to each other and at right angles to a plane tangent to said apex.

40 A method as set forth in Claim 39, wherein one end of said cavity is formed terminating in an end wall.

41 A method as set forth in Claim 39, wherein the other end of said cavity is formed open.

42 A method as set forth in Claim 41, wherein a pair of keys are formed extending from the outer wall of said vial adjacent said open end, said keys extending in opposite directions from each other.

43 A method as set forth in Claim 42, wherein each of said keys is formed with edge and side walls at right angles to each other, said walls being tangent to the outer wall of the vial, with one of said walls being parallel to the plane tangent to the apex of the cavity.

44 A method as set forth in Claim 43, wherein a pair of flanges are formed extending from said vial adjacent said open end in directions opposite from each other and opposite to the directions of the keys.

45 A method as set forth in Claim 44, wherein each of said flanges is formed having a straight wall tangent to the outer wall of the vial and on the same plane as the plane of a side wall of the keys and a curved surface extending from the end the straight wall to the outer wall of the vial, said curved surface conforming to the curvature of the outer wall of the vial.